Claims

1. An automation system,
- having terminals (14) for field devices (20),
- having an excitation component (16) and a measurement component (18) for the field devices (20), and
- having a connection unit (19) for selective connection of the field-device terminals (14) to the terminals (15, 17) of the excitation component or measurement component (16, 18).

2. The automation system as claimed in claim 1, wherein the connection unit (19) is a switch matrix.

3. The automation system as claimed in claim 2, characterized by
a control unit (21) for controlling the switch matrix (19).

4. The automation system as claimed in claim 3, wherein switch matrix (19) and control unit (21) are designed as elements of an integrated circuit.

5. A method for identifying connection errors in field devices (20) connected to an automation system, having the steps:
- supplying by means of an excitation component (16) a signal to a field device (20)
- determining by means of a measurement component (18) a measurement variable assigned to the field device (20), and
- analyzing the measurement variable by means of an analysis unit (21), where by means of a connection unit (19) for selective connection of field-device terminals (14) and terminals (15, 17) of the excitation component or measurement component (16, 18), freely-selectable connection combinations

are used for respectively supplying the signal and determining the measurement variable.

6. The method as claimed in claim 5, characterized by repeating the process of supplying and determining using different connection combinations.

7. The method as claimed in claim 6, wherein the repetition and/or selection of the used terminals (14) depends on the result of the analysis of an earlier measurement.

8. A method for correcting connection errors in field devices (20) connected to an automation system, having the steps:

- identifying a connection error, and
- correcting the connection error by means of a connection unit (19) for selective connection of field-device terminals (14) and terminals (15, 17) of an excitation component or measurement component (16, 18).

9. The method as claimed in claim 8, wherein correction of the connection error includes adapting the connection unit (19) to suit the field-device type.

10. The method as claimed in claim 8 or 9, wherein correcting the connection error involves comparing with a known configuration and appropriate adjustment of the connection unit (19).

11. The method as claimed in any of the claims 5 to 10, wherein the connection unit (19) is controlled by a control unit (21).

12. The use of a connection unit (19) for selective connection of field-device terminals (14) of an automation system to terminals (15, 17) of an excitation component or measurement component (16, 18) of the automation system.